A comment on comment clauses: data from European Portuguese

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Abstract

In this study, we analyze the prosodic realization of comment clauses in European Portuguese in a corpus of spontaneous speech: the Portuguese C-ORAL-ROM corpus. Focusing our analysis on comment clauses involving the verb 'dizer' ('to say'), our main goal is to find if there is a pattern in the prosodic realization of similar comment clauses. Building on regular patterns found for the prosodic structure of these constructions, we discuss systematic relations between prosody and discourse structure in terms of semantic-pragmatic meaning. Our data evidences some regularities in the behaviour of comment clauses involving the verb 'dizer' ('to say'), but we also found asymmetries between the prosodic realization of comment clauses constructed with different verb forms (the conditional form 'diria' – 'I would say' – and the subjunctive form 'digamos' – 'let's say'). We discuss these results considering three main points: (i) the results that have been described for parentheticals (and especially comment clauses) for other languages, (ii) the relation between prosodic structure and scope disambiguation, and (iii) the role of the concept of 'cline of grammaticalization' (Dehé & Wichmann, 2010) in the understanding of the status of comment clauses in the informational structure of the sentence.

Keywords: comment clauses; parentheticals; prosody-discourse interface; European Portuguese.

1. Introduction

Recently, parentheticals have been receiving a special attention in literature and have been studied from different perspectives. Nevertheless, establishing a typology of parenthetical structures or even describing its features can be challenging. One of the reasons is the fact that the designation 'parenthetical' covers a wide variety of structures that are heterogeneous in their nature.

Despite the complexity of the topic, many recent studies are relevant contributes towards a better understanding of the syntactic, semantic, prosodic and pragmatic features of parentheticals (e.g., Dehé & Kavalova, 2007). Moreover, as has been proved by the perspective adopted in several studies, parentheticals provide a very interesting subject for interface studies.

In this paper we focus our attention in a particular type of parentheticals – comment clauses (CC). Specifically we describe data from European Portuguese obtained from the prosodic analysis of CCs formed by verb 'dizer' ('to say') in a corpus of spontaneous speech. The discussion of the results of our prosodic analysis will take into account the relation between prosody and discourse. Our data allow us to indentify some patterns in the prosodic realization of the CCs analyzed and, thus, present some hypothesis regarding the relation between prosody and semantic-pragmatics, specifically in terms of scope disambiguation and grammaticalization.

2. Theoretical Background

Parentheticals have been traditionally described, considering the relation between syntax and prosody, as having some specific characteristics regarding phrasing and intonation, namely that they are separated by pauses from the rest of the utterance (e.g., Nespor & Vogel, 1986; Frota, 2000) and that they are most commonly produced with a lower pitch than the rest of the utterance (e.g., Crystal, 1969; Bolinger, 1989). Authors such as Wichmann (2000), Dehé (2007, 2009), Dehé & Wichmann (2010), on the contrary, argue that there is no one-to-one relation between syntax and prosody and present data (in particular data from spontaneous speech), showing that parentheticals are not obligatory set off by pauses and that they can be associated with different intonation contours.

In the case of European Portuguese, a few studies have described some prosodic features of parentheticals. Frota (2000, in press) describes parenthetical clauses as forming a major intonational phrase (set off by pauses) independent from the rest of the utterance. The author also indicates that parentheticals are associated with the intonation contour L*+H H%. In a study specifically about vocatives, Abalada, Cabarrão & Cardoso (2011) argue that these parenthetical elements do not always form a major intonation phrase and that both the phrasing and the intonation reflect a close relation between syntactic distribution, pragmatic value and prosodic realization of the vocatives. For example, the authors observed that initial vocatives had a stronger tendency to form major intonational phrases than the non-initial (media or final) vocatives and that there were differences in the intonation contours associated with initial and non-initial vocatives.

Regarding CCs, they are often analyzed grouped with other elements, and, accordingly, their characterization is made on a par with other types of parentheticals. Therefore, the prosodic features referred above have been applied to CCs as well. Moreover, the definition of CCs presents some challenges, since it is not always clear where to draw a boundary between them and other parentheticals, such as discourse markers or reporting verbs, as pointed out by Kaltenböck (2007) and Dehé (2009). Both authors present definitions of CCs based on syntactic and semantic criteria: the former identifies CCs with "asyndetic clauses (…) linked to the host in that they contain a syntactic gap (typically the complement of the verb) which is filled conceptually by

Heliana Mello, Massimo Pettorino, Tommaso Raso (edited by), *Proceedings of the VIIth GSCP International Conference : Speech and Corpora*
ISBN 978-88-6655-351-9 (online)

the host clause" (Kaltenböck, 2007: 4) and the latter defines CCs as consisting "of a first-person pronoun and a verb of knowledge, belief or conjecture or a corresponding adjectival construction" (Dehé, 2009: 14).

Furthermore, in what concerns the prosodic features of CCs and the prosody-pragmatics relations, the results discussed in studies such as Peters (2006), Kaltenböck (2007), Dehé (2007, 2009), and Dehé & Wichmann (2010) show that CCs tend to not form a major intonational phrase, being accentuated or not. In fact, these authors mention that there are several factors that can influence the prosodic phrasing of these elements, namely the length, the syntactic complexity and even the semantic-pragmatic scope of the parenthetical element.

Secondly, CCs seem to be associated to various intonation contours. Lowered pitch, higher pitch and rising contours are some of the prosodic realizations of parentheticals described by authors as Bolinger (1989), Wichmann (2000), Dehé (2009), Dehé & Wichmann (2010).

Finally, it is important to mention that Kaltenböck (2007) and Dehé & Wichmann (2010) take into account the interface between prosody and semantic-pragmatics meaning in their analysis. Kaltenböck (2007) focuses on the role of prosody in the disambiguation of the semantic-pragmatic scope of the CCs. In this context, the level of juncture between the CC and the sentence is a key factor to determine the scope of the first one and to decide whether the scope of a CC is clausal or phrasal. On the other hand, Dehé & Wichmann (2010) propose an analysis of 'cline of grammaticalisation', where the prosodic properties of CCs, along with their semantic-pragmatic status, place CCs in a continuum between 'propositional' and 'formulaic' meaning. Hence, the authors argue that prosodic separation and prominence are indicators of CCs with a 'propositional meaning', but that CCs associated with disfluency and hesitations have more of a 'formulaic meaning'. In an intermediate position of this continuum, we can find CCs with prosodic integration and deaccentuation, which have "discursal, interactional and interpersonal purposes" (Dehé & Wichmann, 2010: 39).

3. Methodology

For this study, we analyzed the Portuguese C-ORAL-ROM corpus (Bacelar do Nascimento *et al.*, 2005), a multimedia corpus of spontaneous spoken speech, in a total of approximately 300,000 words. This spoken corpus represents real communication acts collected among sociolinguistically diverse speakers and it is composed by 153 recordings, in a total of 30 hours. Each text/recording comprises: (i) the acoustic source; (ii) the orthographic transcription in CHAT[1] format and enriched with the tagging of terminal and non terminal prosodic breaks, and (iii) session metadata containing essential information of speakers, recording situation and contents of each session; (iv) text-to-sound synchronization, based on the alignment with the acoustic source of each transcribed utterance; (v) a second orthographic transcription with lemma and PoS tags of each form in the transcribed texts, and (vi) frequency lists of forms and lemmas.

This corpus is constituted by different types of informal and formal speech acts, as shown in Table 1, below.

INFORMAL REGISTER			
Family / / Private	Conversations	24,449	
	Dialogs	62,738	
	Monologs	46,005	**133,192**
Public	Conversations	1,817	
	Dialogs	23,119	
	Monologs	7,710	**32,646**
TOTAL			**165,838**

FORMAL REGISTER			
Natural Context	Business	10,215	
	Conferences	9,750	
	Law	6,315	
	Political Debate	8,923	
	Prof. Explanation	6,473	
	Preaching	6,127	
	Political Speech	8,649	
	Teaching	9,822	**66,274**
Media	Interviews	14,570	
	News	1,859	
	Reportages	10,762	
	Scientific Press	9,923	
	Sport	5,676	
	Talk Shows	17,396	
	Weather Forecast	1,930	**62,116**
Telephone	Private		**24,365**
TOTAL			**152,755**

Table 1: Portuguese C-ORAL-ROM corpus constitution

In order to extract our sample of CCs from this corpus, we adopted a definition of CC along the same lines as what has been described in the literature referred above (Kaltenböck, 2007; Dehé, 2009). Then, we selected a sample of 30 occurrences of CCs involving the verb 'dizer' ('to say'), namely the forms 'diria' ('I would say') – 1st person singular of the conditional – and 'digamos' ('let's say') – 1st person plural of the subjunctive present. This sample includes 26 CCs in interpolated contexts and 4 in final contexts. In what concerns the number of syllables, it must be mentioned that the CCs have a minimum of 3 syllables and a maximum of 6 syllables. This variation in the number of syllables is related with some slight differences in the composition of the CCs analyzed. Hence, it is worth noting that, in the case of the 1st person singular of the conditional form, the CCs can be formed: (i) by the verb form – 'diria' –, since European

[1] http://childes.psy.cmu.edu/manuals/CHAT.pdf.

Portuguese is a null subject language; or (ii) by the verb form plus the 1st person singular of the personal pronoun – 'eu' ('I') –, or (iii) by the verb form, the 1st person singular of the personal pronoun, and the adverb 'quase' ('almost'), as in 'quase diria eu' ('I would almost say'). In the case of the 1st person plural of the subjunctive present, on the other hand, the CCs included in our sample are formed either by the verb form only – 'digamos' – or by the verb form followed by the adverb 'assim' ('this way'), as in 'digamos assim' ('let's say it this way').

Regarding the prosodic annotation, we used Praat (Boersma & Weenink, 2009) and our analysis focused on two aspects: (i) the break indices on the left and right boundaries of the CCs, and (ii) the nuclear pitch accent and boundary tone of each CC.

In the annotation of our data, we adopted an autossegmental perspective, accordingly with what is described in Pierrehumbert & Hirschberg (1990) and Beckman, Hirschberg & Shattuck-Hufnagel (2005). Hence, we followed the conventions defined by Viana *et al.* (2007) in the annotation system *Towards a P_ToBI* and took into consideration their description of pitch accents and boundary tones for EP. In what concerns break indices, we annotated the juncture level between the CC and the sentence using the break index values described in ToBI (Beckman *et al.*, 2005) – 0, 1, 3, 4 – in which 0 represents the maximum level of juncture between words, 1 represents a normal level of cohesion inside of a prosodic constituent, 3 represents a minor intonational phrase boundary (in EP), and 4 represents a major intonational phrase boundary.

4. Data

Regarding the data, our analysis reveals important regularities in the prosodic realization of the sample of CCs considered in this study.

Firstly, it is worth discussing the level of juncture between the CCs and the utterance. Hence, the data revealed that the analyzed CCs do not tend to form a major intonational phrase, since only 10% of the totality of our CCd formed a major intonational phrase independent from the sentence. These results enable us to compare our data with some findings reported for other languages: the fact that a syntactic parenthesis does not obligatory correspond to a prosodic parenthesis points to the non existence of a one-to-one relation between syntax and prosody, as has been stated before by Dehé (2007, 2009) or Dehé & Wichmann (2010). Furthermore, and taking into account the number of syllables of the CCs, we hypothesized that variables like the length of the parenthetical also play a role in the prosodic phrasing of the CCs analyzed in this study, in the same line as what is argued by Peters (2006) and Dehé (2009).

Additionally, our data can be related with the results found for vocatives in European Portuguese (Abalada *et al.*, 2011), in terms of prosodic integration, in the sense that, despite of having a different nature than CCs, vocatives are also short parenthetical elements and do not always form a major intonational phrase, especially vocatives in medial and final position.

Nevertheless, we did find a high percentage of CCs that form a minor intonational phrase (73,3%), which suggests that, although CCs are more likely to not form an independent tone unit, this does not necessarily translates in a total prosodic integration of the CC in relation with the host sentence. In fact, we observed, particularly in what concerns the CCs formed by the conditional form ('diria'), some differences in the strength of the break index on the left and right boundaries. As Kaltenböck (2007) remarked, the level of juncture between the utterance and the CC can be related to informational structure, which may represent a clue to identify the semantic-pragmatic scope of the CC. In our data, we also noticed that the phrasing differences referred to above can be related with the fact that the CC has a clausal or phrasal scope. Example (1) illustrates a case in which the phrasing evidences that the CC has a clausal scope, and not a phrasal one, since the break index on the left boundary of the CC ('eu diria') is stronger – [4] – than the one identified on the right boundary – [3].

(1) Os três outros evangelistas [4] eu diria [3] têm características tão salientes e tão próprias (...).

(The other three evangelists [4] I would say [3] have such evident and unique features (…).)

By contrast, CCs formed by the subjunctive verb form ('digamos') evidence a greater level of juncture in relation with the utterance and, significantly, it is on the right boundary of these CCs that we find a higher frequency of break indices of level 0 and 1.

Similarly to what has been described for phrasing, there are also some relevant aspects regarding intonation that provide some clues to a better understanding of the prosodic behavior of the two types of CCs analyzed. First of all, is should be mentioned that there is a high percentage of CCs (86,6%) that are accented. Nevertheless, this percentage is higher in the case of CCs with the conditional verbal form 'diria'. In fact, 18,8% of the CCs formed by the subjunctive form 'digamos' are un-accented (as shown in Table 2).

Regarding the distribution of pitch accents (cf. Table 2), we identified five pitch accents associated with the CCs included in our data. The fact that these parenthetical elements are characterized by various pitch accents allows us to draw a comparison between our data and what has been stated for other languages, namely English, by authors such as Wichmann (2000), Dehé (2009b), Dehé & Wichmann (2010). In spite of the importance of the non-existence of a obligatory association of these parenthetical elements to a certain intonation contour, it is also relevant that, considering both types of CCs ('diria' and 'digamos'), there is a higher percentage of CCs associated with low pitch accents (L*), followed by the rising pitch accent L+H* and by the high pitch accents (H*).

Pitch Accents	Comment Clauses	
	'diria' ('I would say')	'digamos' ('let's say')
H*	21,4%	12,5%
L+H*	21,4%	18,8%
H*+L	7,1%	-
L*+H	7,1%	-
H+L*	14,3%	-
L*	21,4%	50%
Un-accented	7,1%	18,8%
TOTAL	100%	100%

Table 2: Distribution of pitch accents

Once again, though, the data reveals some differences in the prosodic realization of CCs with the conditional form and with the subjunctive form of the verb 'dizer'. As can be observed in Table 2, whereas CCs formed by the conditional verb form 'diria' are characterized by a greater variety of pitch accents (cf. Figure 1), CCs with the subjunctive verb form 'digamos' are associated with three distinct pitch accents. Moreover, in the case of 'digamos', we observe that the L* pitch accent corresponds to 50% of the totality of the occurrences (cf. Figure 2).

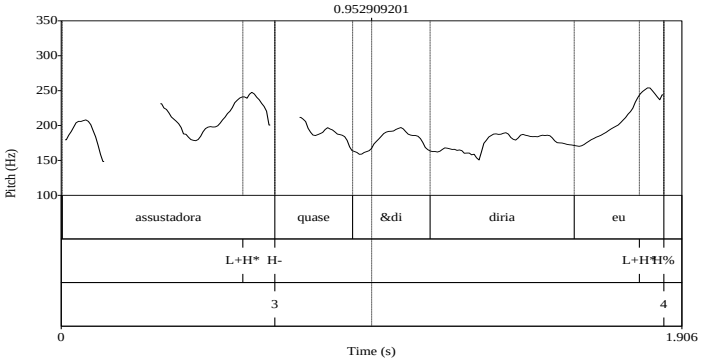

Figure 1: CC with the conditional form 'diria' ('I would say'), which forms a minor intonational phrase and has a rising intonation contour (L+H* H%)

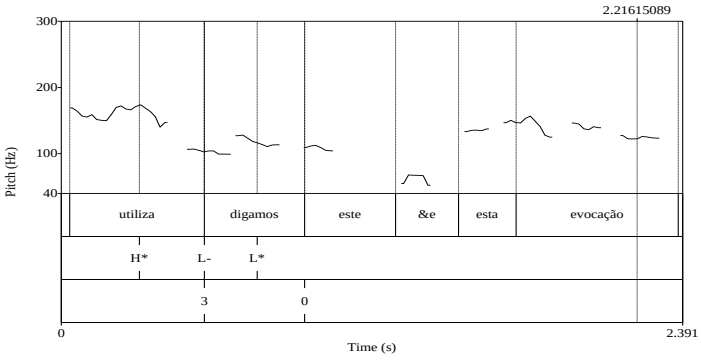

Figure 2: CC with the subjunctive form 'digamos' ('let's say'), which does not form an independent intonational phrase and has a low pitch accent (L*)

In what concerns boundary tones, Table 3 shows that in both types of CCs we found a higher percentage of low boundary tones, but the subjunctive form 'digamos' has a higher percentage of cases with no boundary tone, accordingly to what has been previously discussed about the prosodic integration of CCs with this verb form.

Boundary Tones	Comment Clauses	
	'diria' ('I would say')	'digamos' ('let's say')
H- / H%	35,7%	25%
L- / L%	57,1%	43,8%
No boundary tone	7,1%	31,3%
TOTAL	100%	100%

Table 3: Distribution of boundary tones

We think that the results presented above can be interpreted along the lines of what Dehé & Wichmann (2010) have described as 'cline of grammaticalization'. On the one hand, the fact that the prosodic realization of CCs can play a role in scope disambiguation and that CCs do not evidence a tendency to total prosodic integration seems to indicate that the CCs included in our sample do not have a 'formulaic meaning'. On the other hand, we found differences between CCs with two different forms of the verb 'dizer'. As a result, some of the prosodic characteristics of the subjunctive form 'digamos' contrast with what can be observed for the conditional form 'diria': (i) the former does not seem to play such an important role in scope disambiguation as the latter; (ii) the subjunctive form shows a greater tendency for prosodic integration; (iii) there is a higher percentage of low pitch accents associated with the subjunctive verb form, and (iii) there is a higher percentage of un-accented occurrences of CCs with the subjunctive form. Considering these results, we hypothesize that the two types of CCs are in different stages of a grammaticalization continuum. Hence, whereas CCs with the conditional form seem to have more of a propositional meaning, CCs with the subjunctive form are possibly closer to an intermediate stage between propositional and formulaic meaning, characterized pragmatically has having "discursal, interactional and interpersonal purposes" (Dehé & Wichmann, 2010: 39), and prosodically by prosodic integration and deaccentuation.

5. Conclusion

The results discussed in this paper are a starting point to the study of CCs in European Portuguese. By studying a sample of CCs formed by the same verb – 'dizer' ('to say') – we were able to detect patterns in the prosodic realization of these parenthetical elements.

The fact that CCs do not always form an independent tonal unit and that they are not obligatory associated with a single intonation contour is in agreement with the idea that (i) syntactic parenthesis do

not necessarily correspond to prosodic parenthesis, as argued by Dehé (2007), and (ii) parenthetical elements can have intonation contours other than a lowered pitch accent, as have been shown in studies such as Wichmann (2000), Dehé (2009), and Dehé & Wichmann (2010).

On the other hand, we also found some asymmetries in the prosodic behaviour of CCs with different verb forms, namely the conditional form 'diria' ('I would say') and the subjunctive form 'digamos' (let's say'). We interpreted such asymmetries in relation with CCs' semantic-pragmatic meaning, in terms of scope disambiguation and grammaticalization. More specifically, our data suggested that the conditional verb form evidences more features associated with a propositional meaning than the subjunctive verb form.

6. Acknowledgements

This work was undertaken and supported by the funding of the project METANET4U (grant agreement no.: 270893), co-funded by the 7th Framework Programme and the ICT Policy Support Programme of the European Commission.

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